

CLAIMS

1. A central base (1) for a private wireless local area network, this central base comprising electronic circuits that include an electronic central unit (5) and that are supplied with electricity by at least one live supply line (27) intended to be connected to an external electricity power source, said central base being suitable for communicating:
- on the one hand, with a public telecommunication network (3),
  - and on the other hand, with at least one wireless peripheral device (2), according to a digital bidirectional wireless protocol for a private wireless local area network,
- characterized in that it comprises an interface circuit (30) which is controlled by the electronic central unit (5) of said central base and which is connected to said supply line (27), this interface circuit being suitable for sending and receiving messages on said supply line,
- and in that the interface circuit (30) of the central base is suitable for sending and receiving high frequency periodic signals representative of sent and received messages, and the central base comprises a low-pass filter (L1) suitable for filtering said high frequency periodic signals between the interface circuit (30) of the central base and at least a portion of the electronic circuits of the central base.
2. The central base as claimed in claim 1, in which the interface circuit (30) of the central base is installed in drop and insert mode on said supply line.
3. The central base as claimed in any one of the preceding claims, in which the interface circuit

(30) of the central base is suitable for sending and receiving periodic signals at a frequency lying between 100 and 500 kHz.

- 5    4.    The central base as claimed in any one of the preceding claims, in which the interface circuit (30) of the central base is controlled by the electronic central unit (5) of the central base via a serial interface controller (32).
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5.    The central base as claimed in any one of the preceding claims, suitable for sending outgoing alphanumeric messages at least to the public telecommunication network (3) and for receiving
- 15    incoming alphanumeric messages at least from said public telecommunication network, the electronic central unit (5) of the central base being suitable for:
- 20    (a) recognizing at least certain incoming alphanumeric messages intended for an external interface module (20), called service messages, and for causing to be generated on the supply line (27), by said interface circuit (30) of the central base, a message
- 25    corresponding to each incoming service message,
- 30    (b) and when it receives a message received by the interface circuit (30) of the central base on the supply line (27), determining whether this message must be transmitted to the outside and, in this case, sending an outgoing alphanumeric message, called outgoing service message, corresponding to the message received.
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6.    The central base as claimed in claim 5, also suitable for sending outgoing alphanumeric messages to at least one wireless peripheral device (2) by using said wireless protocol, and

for receiving incoming alphanumeric messages from said wireless peripheral device.

7. A wireless device comprising a central base (8) as  
5 claimed in any one of the preceding claims and an external interface module (20), distinct from the central base, which itself comprises:
  - an electronic central unit (34),
  - and an interface circuit (31) controlled by said  
10 electronic central unit of the external interface module and which is connected to said supply line (25, 27), this interface circuit (31) of the external interface module being  
15 suitable for communicating with the interface circuit (30) of the central base by sending and receiving messages on said supply line (25, 27).
8. The wireless device as claimed in claim 7, in  
20 which the interface circuit (31) of the external interface module is installed in drop and insert mode on said supply line (25, 27).
9. The wireless device as claimed in claim 7 or claim  
25 8, in which the interface circuit (31) of the external interface module is suitable for sending and receiving high frequency periodic signals representative of messages sent and received, and the external interface module (20) comprises a  
30 low-pass filter (L2) suitable for filtering said high frequency periodic signals between the interface circuit (31) of the external interface module and an electricity supply device (22) intended to connect said supply line (25, 27) to the external electricity power source.  
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10. The wireless device as claimed in claim 7, in  
which the interface circuit (31) of the external interface module is suitable for sending and

receiving periodic signals at a frequency lying between 100 and 500 kHz.

- 5           11. The wireless device as claimed in any one of  
            claims 7 to 10, in which the interface circuit  
            (31) of the external interface module is  
            controlled by the electronic central unit (34) of  
            said external interface module via a serial  
            interface controller (33).
- 10           12. The wireless device as claimed in any one of  
            claims 7 to 11, in which the central base (1) and  
            the external interface module (20) are suitable  
            for communicating together according to a half-  
15           duplex asynchronous protocol.
13. The wireless device as claimed in any one of  
            claims 7 to 12, also comprising an external  
20           electronic device (19), distinct from the external  
            interface module (20) and communicating with the  
            electronic central unit (31) of said external  
            interface module.
14. The wireless device as claimed in claim 13, in  
25           which the external electronic device (19) is  
            chosen from a sensor, an actuator and a  
            centralized command and control device suitable  
            for being connected to a plurality of sensors and  
            actuators.
- 30           15. The wireless device as claimed in any one of  
            claims 7 to 14, comprising a central base (1) as  
            claimed in claim 5, and in which the electronic  
35           central unit (34) of the external interface module  
            (20) is suitable for causing messages intended to  
            be sent by the central base (1) in the form of  
            outgoing service messages to be generated on the  
            supply line (25, 27), by the interface circuit  
            (31) of said external interface module.